

REMARKS

Summary of the Office Action

Claims 1-19 are pending in the above-identified patent application.

Claims 1-4 and 7-9 were rejected under 35 U.S.C. § 102(e) as being anticipated by Ettel et al. U.S. Patent No. 5,839,049 (hereinafter "Ettel"). Claims 5, 6, and 10-19 were rejected under 35 U.S.C. § 102(b) as being anticipated by Helferich et al. U.S. Patent No. 4,976,760 (hereinafter "Helferich").

Summary of Applicants' Reply

Applicants have amended the specification to update a cross reference to a related patent application.

The Examiner's claim rejections under section 102 are respectfully traversed.

The Section 102 Rejections

Applicants' claim 1 is directed to a composite porous media filter. The filter includes "a conduit having an inlet for receiving a fluid and an outlet for providing a filtered fluid." The fluid is filtered through a composite porous media positioned within the conduit. The composite porous media includes "a foam having a reticulated, inter-cellular structure with a multiplicity of interconnected pores extending therethrough." The pores of the foam are impregnated with sintered powder.

Ettel

Claims 1-4 and 7-9 were rejected under 35 U.S.C. § 102(e) as being anticipated by Ettel. Ettel relates to a metal plated foam that is used in applications such as lightweight battery plates

(column 2, lines 33 and 34). In contrast to applicants' claim 1, however, Ettel does not refer to any use of the material in a filter, nor does Ettel show or suggest positioning the metal plated foam within a filter including a *conduit* having an *inlet for receiving a fluid* and an *outlet for providing a filtered fluid*. Furthermore, in the Office Action, the Examiner has not provided a reference to any portion of Ettel that discloses a filter having the conduit, inlet, and outlet limitations recited in claim 1. Accordingly, Ettel fails to disclose "a composite porous media filter comprising . . . a conduit having an inlet for receiving a fluid and an outlet for providing a filtered fluid," as set forth in applicants' claim 1.

In addition, Ettel also fails to disclose a "sintered powder impregnating pores of the foam," as set forth in applicants' claim 1. Rather, the metal powder slurry layer of Ettel "overcoat[s] the plated structure," and forms "a sufficiently dense layer of metal" on the outer surface of the foam (column 3, lines 8-20). From applicants' understanding of the reference, nothing in Ettel discloses that the slurry impregnates the pore structure of the foam itself. Furthermore, examples 1-5 of Ettel disclose applying the slurry to a plated foam, in which the slurry is not disclosed as impregnating the pores of the foam (column 3, line 33 to column 5, line 9).

Thus, for at least these reasons, applicants' claim 1 is not anticipated by Ettel, and the rejection of the claim under 35 U.S.C. § 102(e) should be withdrawn. In addition, dependent claims 2-4 and 7-9 are allowable at least because independent claim 1 is allowable over the cited art. Accordingly, the Examiner's rejections of these claims are moot and should also be withdrawn.

Helferich

Claims 5, 6, and 10-19, which variously depend from independent claim 1, were rejected under 35 U.S.C. § 102(b) as being anticipated by Helferich. Helferich is directed to a porous refractory ceramic body made from a hydrogel/ceramic foam. In contrast to applicants' claim 1, however, the "pores of the foam" in Helferich are not impregnated with "sintered powder."

Rather, Helferich discloses the use of particulate metal as an integral part of the hydrogel/ceramic composition used to make the foam. The particulate metal reacts with alkali compounds in the composition to form a gas, which creates pores of the foam (column 3, lines 54-65). Helferich also discloses the formation of a thin porous ceramic membrane layer on the surface of the porous body (column 7, lines 52-60). The membrane can be formed by applying to a surface of the body a slurry or powder containing a fugitive pore-forming constituent or a material more refractory than the body material. Upon firing, a porous or partially-sintered membrane is formed on the surface of the porous body (column 7, line 65 – column 8, line 29). Thus, any sintered powder forms a layer on top of the foam. Accordingly, Helferich fails to disclose "sintered powder impregnating pores of the foam," as set forth in applicants' claim 1.

In addition, Helferich also fails to explicitly disclose that the ceramic body is within "a conduit having an inlet for receiving a fluid and an outlet for providing a filtered fluid," as set forth in applicants' claim 1. In connection with this feature of applicants' claim 1, the Examiner refers to the Abstract of Helferich. However, the Abstract discloses a filtering element made up of a porous ceramic body "preferably containing on the *filter inlet and/or outlet surface* thereof an integral thin porous ceramic membrane layer" (emphasis added). Thus, while Helferich sets forth that the ceramic body itself has inlet and outlet surfaces, Helferich does not explicitly disclose that the ceramic body is within a *conduit* having an *inlet* and an *outlet*. Accordingly,

Helferich also fails to disclose "a conduit having an inlet for receiving a fluid and an outlet for providing a filtered fluid," as set forth in applicants' claim 1.

Thus, for at least these reasons, applicants' claim 1 is not anticipated by Helferich. It follows that, because claims 5, 6, and 10-19 all variously depend from independent claim 1, claims 5, 6, and 10-19 also are not anticipated by Helferich. Accordingly, the Examiner's rejections of these claims under 35 U.S.C. § 102(b) are moot and should be withdrawn.

Conclusion

The foregoing demonstrates that claims 1-19 are patentable. This application is therefore in condition for allowance. Reconsideration and prompt allowance are accordingly respectfully requested.

Authorization


The Director is hereby authorized to charge any additional fees which may be required for this Reply, or credit any overpayment, to Deposit Account No. 08-0219.

In the event that an extension of time is required, or which may be required in addition to that requested in a petition for an extension of time, the Director is requested to grant a petition for that extension of time which is required to make this response timely and is hereby

authorized to charge any fee for such an extension of time or credit any overpayment for an extension of time to Deposit Account No. 08-0219.

Respectfully submitted,
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